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Module specification

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Module Code	COM754
Module Title	Research Methods for Digital Technologies
Level	7
Credit value	20
Faculty	FACE
HECoS Code	100962 – Research Skills
Cost Code	GACP

Programmes in which module to be offered

Programme title	Is the module core or option for this programme
MSc Computer Science	Core
MSc Computer Science (with Advanced Practice)	Core
MSc Software Engineering	Core
MSc Software Engineering (with Advanced Practice)	Core
MSc Cyber Security	Core
MSc Cyber Security (with Advanced Practice)	Core
MSc Big Data and Data Analytics	Core
MSc Big Data and Data Analytics (with Advanced Practice)	Core
MSc Computer Game Development	Core
MSc Computer Game Development (with Advanced Practice)	Core
MA Game Art	Core
MA Game Art (with Advanced Practice)	Core

Pre-requisites

None

Breakdown of module hours

Learning and teaching hours	21 hrs
Placement tutor support	0 hrs
Supervised learning e.g. practical classes, workshops	0 hrs
Project supervision (level 6 projects and dissertation modules only)	0 hrs

Total active learning and teaching hours	**21** hrs
Placement / work based learning	0 hrs
Guided independent study	179 hrs
Module duration (total hours)	200 hrs

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Initial approval date	10/05/2023
With effect from date	September 2023
Date and details of revision	08/11/2023 Addition of programme titles during Computing revalidation
Version number	2

Module aims

The module will provide the necessary underpinning skills to ensure that competent work and standards are achieved and maintained throughout the student's chosen programme of study. This will encompass the development of professional level information handling and analysis skills, as well as ensuring students become proficient at planning and managing their own research projects.

Module Learning Outcomes - at the end of this module, students will be able to:

1	Synthesise complex information from a variety of sources
2	Critically evaluate research methodologies in the context of research for digital technology
3	Plan and execute a small research project
4	Compile, analyse and disseminate data in relation to a small research project

Assessment

Indicative Assessment Tasks:

This section outlines the type of assessment task the student will be expected to complete as part of the module. More details will be made available in the relevant academic year module handbook.

Assessment number	Learning Outcomes to be met	Type of assessment	Weighting (%)
1	1,2,3,4	Coursework	100%

Derogations

None

Learning and Teaching Strategies

The early stages of the module will be delivered through a mixture of lectures and tutorials as students are guided through the formal processes relating to research practice. Sessions will be supported with a range of digital content and activities designed to encourage directed study.

The later stages of the module will transition to more tutorial-based sessions with informal support as the research projects approach their completion.

Throughout the module, students will have the opportunity to disseminate and discuss information through student-led seminars and peer group discussions. Guest speakers may utilised where appropriate to strengthen the diversity and scope of the module content. Students will have access to lecture materials, and ancillary resources, via the University's VLE platform.

Indicative Syllabus Outline

- Postgraduate-level study and study skills
- Self-reflection and critical thinking
- Professional presentation of information
- Overview of the research domain
- Evaluating information sources
- Referencing / how to avoid plagiarism
- Qualitative and quantitative research methods
- Statistical analysis
- Hypothesis testing
- Critical analytical thinking
- Research and professional ethics

Indicative Bibliography:

Please note the essential reads and other indicative reading are subject to annual review and update.

Essential Reads

Oates, B. J., Griffiths, M., McLean, R. (2022), *Researching Information Systems and Computing*, Second Edition, California: Sage Publication Ltd.

Wallace & Wray, (2021) *Critical Reading and Writing for Postgraduates*, Sage Publications Ltd

Other indicative reading

Carlo Lauro, N., Amaturo, E., Grassia,M. G., Aragona, B., Marino, M. (2017), *Data Science and Social Research: Epistemology, Methods, Technology and Applications*, Berlin: Springer.

Lankoski, P., Bjork, S. (2015) *Game Research Methods: An Overview*, North Carolina: Lulu Press.

Lazar, J. (2017), *Research Methods in Human-Computer Interaction*, Second Edition, Massachusetts: Morgan Kaufmann

Paarsch, H. K. (2016), *A Gentle Introduction to Effective Computing in Quantitative Research: What Every Research Assistant Should Know*, Massachusetts: MIT Press.

Squire, K. (2010), *Real-Time Research: Improvisation Game Scholarship*, North Carolina: Lulu Publishing.